VIEWPOINT

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Sex Education in the 21st Century

Controversies about the proper content of school-based sex education continue, but in some fundamental sense they have been matched by—perhaps even overtaken by—other pressing realities. For example, there are increasing demands that school resources be dedicated to teaching the basics of reading, writing, and math and to upgrading the attention given to science education. Many communities find that meeting these legitimate demands places substantial pressure on school hours and budgets, often at the expense of such areas as art and physical education as well as health education, which often includes sex education. Moreover, limited budgets can also decrease the amount of training made available to sex education teachers.

This situation is particularly distressing because during the last decade, increasing numbers of programs have become available that can help teens delay having sex, increase their use of contraception when they do have sex, and potentially help reduce the incidence of teen pregnancy. Some of these programs are based in schools, some are in community settings, and some span both. ¹⁻³ The US Department of Health and Human Services'

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Office of Adolescent Health lists 31 such programs that have evidence of effect, ³ and the list has played a major role in shaping the funding priorities of the Teen Pregnancy Prevention Program administered by that office.

Numerous schools and communities welcome these evidence-based programs, and funding through the Office of Adolescent Health and the Family and Youth Services Bureau has supported many such programs nationwide and also has increased the amount of attention given to using and replicating effective programs. Even so, many sexually experienced teens (46% of males and 33% of females) report that they had not received any instruction about contraception before they began having sex,² and states like Oklahoma and Alabama—with 2 of the highest rates of teen pregnancy in the country—do not require any sex education in school at all.⁴ Moreover, in some communities the "sex ed wars" (ie, the intense and vocal controversy over sex education in schools) persist as they have for decades.

Such developments suggest a need to rethink the way in which sex education is offered to young people. In the age of smartphones, texting, Twitter, Instagram, and Facebook, sex education should evolve to fit the 21st century and the media-saturated lives of young people

today. A strong case can be made that in the United States, the media are already the de facto sex educators (the average teenager sees 15 000 sexual references on television alone each year). Perhaps it is time to fully embrace the power of 21st-century communication and direct it toward public health goals more deliberately. Online material and social media could help to fill the gaps in sex education and support for many young people.

Sex education materials and conversations provided through digital and social media could be useful adjuncts to classes and programs that may be offered in a community or school system; in areas where no such programs exist, they may help to fill serious gaps. Two increasingly popular sites sponsored by The National Campaign to Prevent Teen and Unplanned Pregnancy, StayTeen.org and Bedsider.org, and other engaging sites such as Go Ask Alice!⁵ and Scarleteen,⁶ are expanding understanding of how digital media can help. These sites provide information in an accurate and appealing way. An amusing video on Bedsider.org, for example, shows a young adult woman explaining her initial reluctance to

use a contraceptive vaginal ring and how she mastered the method, and funny "Fact or Fiction" cartoons that include physician commentaries debunk common myths in a relaxed but accurate way.

In addition, some community groups and local health departments around the country (in California, New Mexico, and North Carolina, for example) have estab-

lished digital services to which teens can text their sexrelated questions. These emerging sites and systems may appeal in particular to teens who are more comfortable obtaining sexual information anonymously than they are in a coed sex education class or asking their parents for information. Unlike many community or school-based sex education classes, Internet-based sex information can be available throughout a teenager's adolescence. Questions may change, new situations arise, and new treatments or scientific information sometimes develop; the Internet can be a good repository for updated, ongoing sex information that any teenager can access anytime. In a recent survey of more than 1200 Australian teenagers, for example, the most common source of information about sex actually was the Internet (85%). Misinformation on the Internet does exist, but professional oversight may help direct teens to reputable, accurate sites. In addition, "good" sexual content may help to drown out "bad" sexual content (Gresham's corollary). In any event, sex education should not miss out on the worldwide move to use online systems to improve health.

Sex education in the 21st century merits time, attention, innovation, and, in particular, research to as-

Corresponding Author: Victor C. Strasburger, MD, University of New Mexico School of Medicine, MSC 10 5590, 1 University of New Mexico, Albuquerque, NM 87131 (vstrasburger@salud .unm.edu). sess possible benefit. For example, 4 issues might be addressed. First, can online sex education systems help young people learn some of the key skills increasingly seen as central to risk reduction, such as negotiating skills and a strong sense of agency and self-efficacy? Or is the main value of these online sites more likely to be in the somewhat less difficult task of providing information? The research base here is weak at best, although one study of sexual health promotion on Facebook has demonstrated that young people will at least access this information. In addition, methods of assessing the effect of online interventions on behavior are currently an emerging topic in research design.

Second, is there a way for online sex education to be presented in the voice and tone of teens to reflect their concerns yet also provide accurate and credible information? Adults and professionals could lead the way, but a site that feels like it is the product of a lecturing, authoritarian, adult group may well be unpopular. Involvement of teens in the development of sites will likely be needed for success, and teen-appropriate humor and perspective could be especially attractive. One site currently has been developed and is administered solely by teens; its motto is "by teens, for teens."

Third, might there be a way for professional groups like the American Academy of Pediatrics, the Society for Adolescent Health and Medicine, the American Academy of Family Physicians, and the National PTA to create a standardized but fully teen-centric core set of materials, lessons, and interactive components that could then be "localized" by community groups? Detailed information on adolescent-centered services and where to go for what types of help, including information on confidentiality, cost issues, and privacy, would be particularly useful for teens. Fourth, how can online systems support and amplify evidence-based programs already in use? Are there some instances in which the online platform is preferable?

Given the controversies about sex education that have limited the full use of well-designed, evidence-based programs, the acceptance and use of online sex education and support remain to be determined. However, because the Internet is essentially unregulated, there is no need to secure anyone's particular approval for any site or its content, improving access of teens to sex information without school board approval. In addition, although not all teens are in school, odds are that they are online. The Internet is already a major source of sex information, some of it inaccurate, so why not encourage development of responsible, relevant sex information that would appeal to teens and be easy to use? It may be an idea for which the time has come.

ARTICLE INFORMATION

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